

THE STRATEGIC DEFENSE INITIATIVE

STATEMENT BY

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I am honored to provide testimony for your deliberations on the Strategic Defense Initiative (SDI). I was the Vice Chairman for the Defensive Technologies Study which I understand is the technical basis of the SDI. By way of background, I am currently the President of GA Technologies Inc., and I am a former director of Los Alamos National Laboratory. I share the view of the Defensive Technology Study Team (DTST) that research on the technologies included under the SDI is vital to the future security of the United States and its allies.

The reasons for embarking on the SDI take two equally important forms. First, it is absolutely clear to me that our adversaries have been pursuing a complete spectrum of defensive technologies, passive and active, at the maximum pace possible. If the Soviet Union were to deploy a militarily effective ballistic missile defense system without a corresponding US and allied capability, our security would be in grave danger. From a second perspective, I see the promise of extremely effective ballistic missile defense in the technologies we will pursue. Our study showed us something we would not have believed a few short years ago. New technologies in such diverse areas as directed energy weapons, precision sensors, microelectronics and advanced kinetic weapons such as rail guns, make militarily effective ballistic missile defense feasible. Unless we commit to a long term R&D program we will never be certain. I believe that the

United States must embark upon a vigorous and focused research and technology program to provide the option for future Presidents to rely on defensive systems to supplement deterrence with a degree of assured survivability in the event deterrence fails. The hope of a safer world, based on strategic defense, fully justifies this essential effort. Achieving this promise will not be easy or near term. We must be dedicated to a long and sustained effort on these technologies, and other new ones which will undoubtedly become available as we move forward. As our efforts begin to bear fruit, I see enhanced opportunities for arms reduction and arms accords and a more stable world. Clearly meaningful arms reductions will make the defensive systems more effective and we must continue our efforts in this most important area.

I fear that we might be reticent about pursuing some of the new technologies for fear that a focused defensive technologies effort might trigger renewed efforts by our adversaries in this area. I fail to see how our effort can incite more vigorous pursuit of these technologies than is already going on in the Soviet Union.

I fully appreciate that we must be realistic about expenditures and therefore I would like to underscore several technical areas which have critical importance to the United States both as they relate to the SDI and to other vital national

needs. The absolutely critical issue of survivability for space surveillance sensors and their ground systems is one we cannot ignore. We must pursue this question at the highest priority since the viability of most effective ballistic missile defense schemes requires that we at least have highly survivable space-based sensors together with their ground systems. Moreover, whether we ever choose to deploy ballistic missile defense systems or not, we must have reliable and survivable boost-phase detection sensor systems to preserve our current deterrent. Related to this issue is our urgent need for a survivable command, control and communications (C3) system. Our ability to perform ballistic missile defense depends on this aspect as does our ability to conduct any military operation. A third vital area is the need to generate power of many megawatts in space. Our best current space power systems, based on solar panels, produce a few kilowatts. The advanced weapons and even the surveillance and battle management systems needed for ballistic missile defense will use orders of magnitude more power than we can currently achieve. But beyond the power requirements for SDI, continued scientific exploration of the solar system and eventually industrialization of space must have power sources similar to those to be developed by the SDI. Although to me these three technical areas are of paramount importance, there are many other technical needs which will be pursued under the SDI which also have far reaching importance for the United States.

I believe that the Strategic Defense Initiative warrants your full support. The technologies to be pursued under its auspices are critical to the future security of the United States and the stability of the world. I must stress, as did the DTST, the importance of central management for the SDI. Work on these new technologies must be centrally planned, budgeted, and controlled or we will not have them available when we need them; either for ballistic missile defense or any other national need. We must vigorously pursue the SDI as they contain the seeds for a safer world. The Defensive Technologies Study showed that an effective defense against ballistic missiles was conceivable; the SDI will show whether it is realizable.